

The Role Of Honeybees In Indonesian Society

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I. INTRODUCTION

Bee lives Every where

The Potency of Bee

The value of Honey

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BEE LIVES EVERY WHERE



Honey Harvest



Giant honey comb



Apis cerana at parrarubber plantation





Honey bee well adapted to the wide range of environment

"Zero Feed cost"

Manageable

Stated on almost all "Holy Books"

**Bibel :16:1`3-35
(Manna, Kanaan).
Injil : Josua 5-6
Weda : Antioxidant
Al Qur'an: An Nahl 68-69**

The Most important thing is the feed sources (nectar and pollen)

Kembali

II. Bee Product

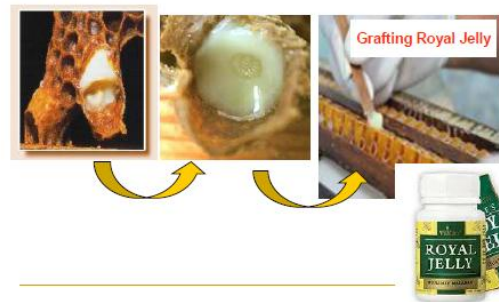


HONEY



1. **Honey**
2. **Bee Pollen** or Bee bread
3. **Royal jelly**
5. **Propolis**
6. **Bee venom**
7. **Wax**

Royal jelly



Bee Pollen



Pollen Trap



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Bee wax



Propolis



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Bee venom for Apipuncture therapy



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- Honey for food and health
- Economic value
- Environmental Value

According to scientific evidence
Honeybee is considered as food
rather than medicine.

As food, honey is mainly composed
of the simple sugars fructose and
glucose

Kembali

Average composition of honeys and the ranges of values

Component (% except pH and diastase value)	Average	Standard deviation	Range
Water	17.2	1.5	15 - 26
Fructose	38.2	2.1	27 - 45
Glucose	31.3	3.0	22 - 41
Sucrose	1.3	0.9	0.2 - 8
Maltose	7.3	2.1	2 - 16
Diastase value	20.8	9.8	2.1 - 61.2

- honey provides immediately available calories
- Sources of antioxidant

As medicine

- As medicinal food, honey and other honey products are believed possessing benefit to human health such as:
 - ✓ Benefits to the digestive apparatus
 - ✓ Benefits to the respiratory system
 - ✓ Benefits to skin and wound healing
 - ✓ Benefit to eye disorders
 - ✓ Medicine-like benefit

Medicine-like benefit

- diabetes
- treating anemia and normalizing blood pressure
- treating burn wound
- treating rheumatism
- improving appetite
- treating cold, cough, and fever
- helping to improve intelligence
- treating diseases / disorders oral hygiene
- increasing the production of hormones
- helping function of the digestive tract

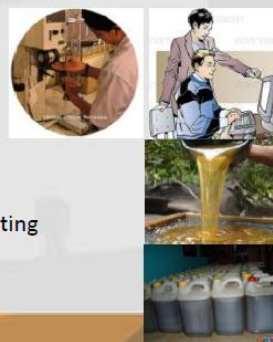
- assisting in the treatment of cancer
- overcoming insomnia
- improve immunity and vitality
- smoothing urination
- assisting in the postoperative recovery
- helping pregnant women
- improving kidney function
- treating stomach ulcers

- In Temanggung and Bogor
- Bee product curing health center
 - ✓ Detecting human illness by consuming honey
 - ✓ Curing illness by consuming honey, royal jelly, propolis and/or bee pollen
 - ✓ Apiculture practices

In Term of Economic effect

HONEY BEE AGRIBUSSINESS

- Natural Resources
- Human Resources
- Capital
- Technology
- Processing
- Promotion and Marketing



NATURAL RESOURCES

1. Forest (143 million ha)
2. Plantation: coffee, pararubber, etc (3 million ha)
3. Vegetable: corn, tomatoes, chilli
4. Horticulture plantation : manggo, rambutan, durian, longan
5. Shrub, bush

All together abaout 200 million ha as bee feed sources

Species of bee in Indonesia

- Potential Local bee:
 - *Apis dorsata*
 - *Apis cerana*
 - *Apis florea*
 - *Trigona*
- Imported bee
 - *Apis mellifera*



Economic parameter of 50 colony scale

No	Parameter	Score
1	B/C Ratio	1,23
2	NPV (I=18%)	156.570.124,15
3	NPV (I=25%)	121.949.398,44
4	IRR	182,76%
5	Pay Back Period	1,11
6	BEP (unit)	

HUMAN RESOURCES

- Indonesian population 250. 000.000
- The need of honey 30 g/capita/year
- Indonesia need 7500 tonnage/year
- Indonesia produce around 4000 tonnage/year
- Indonesia imports honey from USA, China, Brazil, Middle east Asian countries.

EXPORT-IMPORT OF HONEY 2013

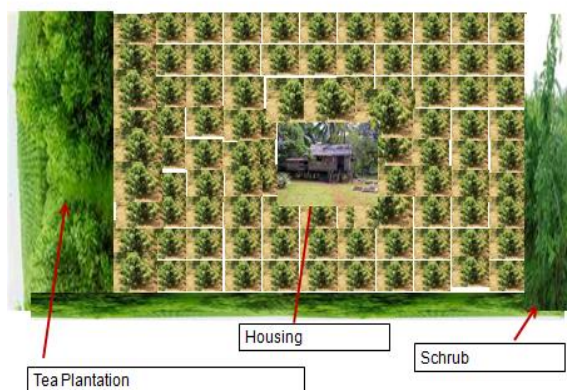
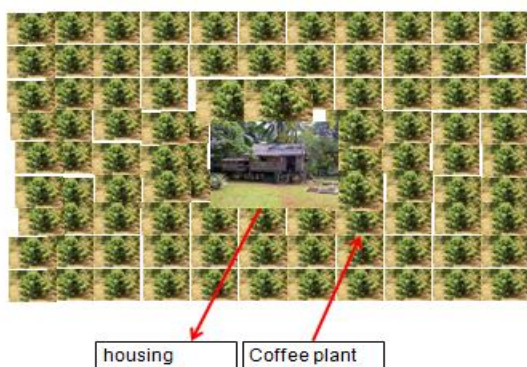
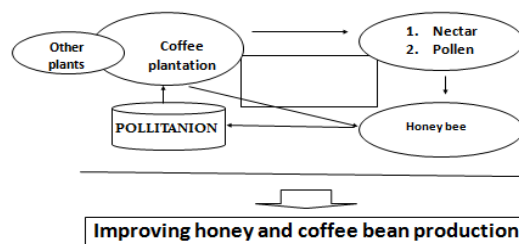
	Kg	USD
EXPORT	206,990	2,348,239.00
INPORT	2,177,424	8,333,688.00
DEFISIT	1,970,434	5,985,449.00

- CAPITAL
- TECHNOLOGY
- PROCESSING
- PROMOTION AND MARKETING

Environmental Value

- Bee as Pollinator
- Improving seedling
- Increasing Sustainability index

Integrated farming system of Honey bee and coffee plantation



The effect of intgration to honey and coffee bean product

- The honey production with integrated system was improved 114%
- The coffee bean production with integrated system was improved 10.55%

The effect of intgration to coffee bean product

	Plantation I	Plantation II	Average
Without honey bee (Tonnage)	1,16	1,21	1,185
With honey bee (Tonnage)	1,35	1,27	1,31
		differences	0,125
			10,55 %

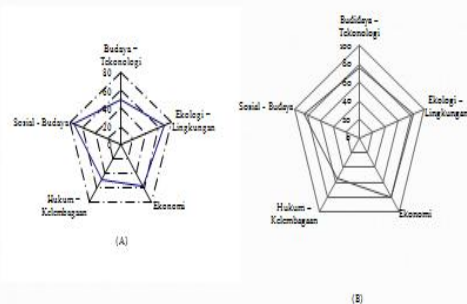
Coffee condition



Sustainability Analyses

No.	Dimension	IkRafBee		Status	
		Before	After	Before	After
1	Agriculture / Technology	49,11	76,19	poor	Very good
2	Ecology / Environment	69,53	84,20	good	Very good
3	Economy	57,06	79,24	good	Very good
4	Law and Culture	49,62	54,90	poor	good
5	Socio-Cultural	73,18	85,28	good	Very good
6	The model	59,50	76,00	good	Very good

Kite diagram



Before

After

Conclusion

- Honey bee plays an important role in Indonesian societies
- Scientific evident show that honey is considered as food, but in most of Indonesian believe that honey is considered as medicine like.
- Developing honey bee are able to increase sustainability index value of 76.00 (very good).

I consume honey everyday



Start a nice day with honey and Milk



Thank You